

z/OS



MVS System Data Set Definition

z/OS



MVS System Data Set Definition

Note

Before using this information and the product it supports, be sure to read the general information under "Appendix. Notices" on page A-1.

First Edition, March 2001

This edition applies to Version 1 Release 1 of z/OS (5694-A01) and to all subsequent releases and modifications until otherwise indicated in new editions.

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About This Book

This book explains how to define system data sets for a system running z/OS, including data sets required for DFSMSdfp.

Who Should Use This Book

This book is intended for anyone who needs to select and define system data sets for z/OS.

How to Use This Book

This book is divided into the following chapters:

- Chapter 1. Selecting and Defining System Data Sets lists the system data sets that you might need to select, and explains how to define those system data sets through JCL and/or access method services.
- Chapter 2. System Data Set Descriptions describes the master catalog and the system data sets.
- Chapter 3. Using Data Sets from the Old Production System explains how to use some of the system data sets from an old production system.

Where to Find More Information

Where necessary, this book references information in other books, using shortened versions of the book title. For complete titles, and order numbers of the books for all elements of z/OS, see *z/OS Information Roadmap*.

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Using LookAt to look up message explanations

LookAt is an online facility that allows you to look up explanations for z/OS messages and system abends.

Using LookAt to find information is faster than a conventional search because LookAt goes directly to the explanation.

LookAt can be accessed from the Internet or from a TSO command line.

You can use LookAt on the Internet at:

<http://www.ibm.com/servers/eserver/zseries/zos/bkserv/lookat/lookat.html>

To use LookAt as a TSO command, LookAt must be installed on your host system. You can obtain the LookAt code for TSO from the LookAt Web site by clicking on **News and Help** or from the *z/OS Collection*, SK3T-4269.

To find a message explanation from a TSO command line, simply enter: **lookat** *message-id* as in the following example:

```
lookat iec192i
```

This results in direct access to the message explanation for message IEC192I.

To find a message explanation from the LookAt Web site, simply enter the message ID. You can select the release if needed.

Note: Some messages have information in more than one book. For example, IEC192I has routing and descriptor codes listed in *z/OS MVS Routing and Descriptor Codes*. For such messages, LookAt prompts you to choose which book to open.

Summary of Changes

**Summary of Changes
for SA22-7629-00
z/OS Version 1 Release 1**

This book contains information also presented in *OS/390 MVS System Data Set Definition*.

Chapter 1. Selecting and Defining System Data Sets

Before you install z/OS, you must select and define the system data sets that you need. Table 1-1 on page 1-1 lists the data sets that you might need. For more information about each data set, see “Chapter 2. System Data Set Descriptions” on page 2-1.

Using Partitioned Data Set Extended (PDSEs)

If you have DFSMS/MVS installed, and you have SMS active, you can place some system data sets (in PDSEs) on SMS-managed volumes:

- SYS1.CSSLIB
- SYS1.LINKLIB
- SYS1.MIGLIB

In addition, data sets in the LNKST concatenation can also be PDSEs.

However, other system data sets *cannot* be PDSEs:

- SYSn.IPLPARM
- SYS1.LPALIB and data sets in the LPALST concatenation
- SYS1.NUCLEUS
- SYS1.PARMLIB
- SYS1.PROCLIB
- SYS1.SVCLIB

In addition, programs that reside in the LPA (PLPA, MLPA/EMLPA, and FLPA/EFLPA) cannot be in PDSEs.

The requirements of your particular installation determine which of the other system data sets you can place on SMS volumes.

Defining Other Types of Data Sets

Before you include components from the distribution libraries (DLIBs) and user-defined data sets in the system, use JCL and access method services to define the system data sets as follows:

1. Define the master catalog as shown in “Defining the Master Catalog” on page 1-4. You must define the master catalog first. You can, for example, define it in the first step of a job, then define the remaining system data sets in subsequent steps.
2. Define the virtual storage access method (VSAM) system data sets as shown in “Defining VSAM System Data Sets” on page 1-10. Use the access method services commands to catalog and allocate VSAM system data sets (master catalog, SMF data sets, the VIO journaling data set, and page data sets).
3. Define the non-VSAM system data sets as shown in “Defining Non-VSAM System Data Sets” on page 1-5. Use the access method services DEFINE command to catalog the non-VSAM data sets and JCL to allocate them.

Table 1-1. Summary of System Data Sets

System Data Set	Type	Required or Optional?	Secondary Space Allocation Allowed?	Sharable by Multiple Systems?	Notes
BROADCAST	Partitioned	Required	No	Yes	1, 9
APPCSI	VSAM KSDS	Optional	No	Yes	1
APPCTP	VSAM KSDS	Optional	No	Yes	1

Table 1-1. Summary of System Data Sets (continued)

System Data Set	Type	Required or Optional?	Secondary Space Allocation Allowed?	Sharable by Multiple Systems?	Notes
CMDLIB	Partitioned	Optional	Yes	Yes	
CSSLIB	Partitioned	Required	Yes	Yes	1, 6, 9, 5
DAE	Sequential	Optional	Yes	Yes	1
DGTCLIB	Partitioned	Optional	Yes	Yes	
DGTL LIB	Partitioned	Optional	Yes	Yes	
DGTMLIB	Partitioned	Optional	Yes	Yes	
DGTPLIB	Partitioned	Optional	Yes	Yes	
DGTSLIB	Partitioned	Optional	Yes	Yes	
DGTTLIB	Partitioned	Optional	Yes	Yes	
DUMPnn	Sequential	Optional	Yes	No	9, 10
Duplex Data Sets	VSAM	Optional	No	No	2, 3
FDEFLIB	Partitioned	Optional	Yes	Yes	
FONTLIB	Partitioned	Optional	Yes	Yes	
HELP	Partitioned	Optional	Yes	Yes	
IMAGELIB	Partitioned	Required	Yes	Yes	1, 9
INDMAC	Partitioned	Optional	Yes	Yes	
IODF	VSAM	Required	No	Yes	4
IPLPARM	Partitioned	Optional	Yes	Yes	8
ISAMLPA	Partitioned	Optional	Yes	Yes	
LINKLIB	Partitioned	Required	Yes	Yes	6, 9, 5
LOGREC	Sequential, unmovable (PSU)	Optional	No	No	
LPALIB	Partitioned	Required	Yes	Yes	8, 9, 11
MACLIB	Partitioned	Required	Yes	Yes	
MANn	VSAM	Optional	No	No	9
Master Catalog	ICF or VSAM	Required	Yes	No	3
MIGLIB	Partitioned	Required	Yes	Yes	6, 9, 5
MODGEN	Partitioned	Required	Yes	Yes	
MSGENU	Partitioned	Optional	Yes	Yes	
MSGJPN	Partitioned	Optional	Yes	Yes	
NUCLEUS	Partitioned	Required	No	Yes	7, 8, 9, 11
OVERLIB	Partitioned	Optional	Yes	Yes	
Page Data Sets	VSAM	Required	No	No	2, 3
PARMLIB	Partitioned	Required	Yes	Yes	8, 9
PASSWORD	Sequential	Optional	No	No	7
PDEFLIB	Partitioned	Optional	Yes	Yes	
PROCLIB	Partitioned	Required	Yes	Yes	8, 9
PSEGLIB	Partitioned	Optional	Yes	Yes	
SAMPLIB	Partitioned	Required	Yes	Yes	
SBLSCLI0	Partitioned	Optional	Yes	Yes	
SBLSKEL0	Partitioned	Optional	Yes	Yes	
SBLMSG0	Partitioned	Optional	Yes	Yes	
SBLSPNL0	Partitioned	Optional	Yes	Yes	
SBLSTBL0	Partitioned	Optional	Yes	Yes	
SCBDCLST	Partitioned	Optional	Yes	Yes	
SCBDHENU	Partitioned	Optional	Yes	Yes	
SCBDHJPN	Partitioned	Optional	Yes	Yes	
SCBDMENU	Partitioned	Optional	Yes	Yes	
SCBDMJPN	Partitioned	Optional	Yes	Yes	
SCBDPENU	Partitioned	Optional	Yes	Yes	
SCBDPJPN	Partitioned	Optional	Yes	Yes	
SCBDTENU	Partitioned	Optional	Yes	Yes	

Table 1-1. Summary of System Data Sets (continued)

System Data Set	Type	Required or Optional?	Secondary Space Allocation Allowed?	Sharable by Multiple Systems?	Notes
SCBDTJPN	Partitioned	Optional	Yes	Yes	
SISTMAC1	Partitioned	Optional	Yes	Yes	
STGINDEX	VSAM	Optional	No	No	2, 3
SVCLIB	Partitioned	Required	Yes	Yes	7, 8, 11
TCOMMAC	Partitioned	Optional	Yes	Yes	
TELCMLIB	Partitioned	Optional	Yes	Yes	
UADS	Partitioned	Optional	Yes	Yes	1, 9
VTAMLIB	Partitioned	Optional	Yes	Yes	

Notes:

1. If you share this data set among multiple processors, you must provide integrity through a serialization component, such as global resource serialization.
2. Allocate space in cylinders.
3. During initial installation, allocate space for the master catalog, page data sets, and the VIO journaling data set on a single volume. After the initial IPL, distribute these data sets on separate volumes for improved performance.
4. Do not define this data set through JCL and access method services. Allocate it only through hardware configuration definition (HCD). See "IODF" on page 2-1. A production IODF must not reside on more than one extent.
5. Updates to this data set (or any other in LINKLST) will not be effective until LLA refresh is performed.
6. For this data set (or any data set in the LNKLIST concatenation), you can create a secondary data set extent by either updating an existing member or adding a new member. If the data set is a PDS (not a PDSE), the system cannot access any module in that secondary data set extent until you re-IPL the system.
7. Put this data set on the system residence volume.
8. This data set must be a PDS. It cannot be a PDSE.
9. The high-level qualifier of this data set must be SYS1.
10. Consider RACF implications of automatic allocation of dump data sets (RACF is part of Security Server). Refer to "Protecting System Data Sets" for information.
11. You must IPL the system to make updates to this data set effective.

Protecting System Data Sets

Do *not* use password protection; use the Resource Access Control Facility (RACF) or an equivalent security product, to protect your system data sets in accordance with your installation's security policy. (RACF is part of Security Server.) See your security administrator for details.

RACF considerations:

- According to your installation's needs, create a combination of discrete and generic DATASET profiles. To reduce the number of profiles, use generic profiles as much as possible.
- If all (or most) users on your system should have read access to a particular data set, assign that data set a UACC (universal access authority) of READ.
- If few (or no) users on your system should have read access to a particular data set, assign that data set a UACC of NONE.
- Allow selected users (or groups) to have UPDATE, or higher, access, so they can maintain the data sets.
- If security labels are used on your system, consider assigning them to the system data sets.

- Starting with MVS/ESA SP 5.1, the system can automatically allocate dump data sets using the name pattern established at IPL or using the DUMPDS operator command. Be sure to protect these new data sets according to your installation security policy.

For more information on how to protect system data sets, see the *z/OS SecureWay Security Server RACF Security Administrator's Guide*.

Note: You can also use RACF to protect authorized programs in your authorized programming facility (APF) libraries.

Defining the Master Catalog

Define an integrated catalog facility catalog as the master catalog.

After you define the master catalog, you can use the LISTCAT command to print the names of the entries in the new catalog.

The system you are using to define the new master catalog already has a master catalog. Therefore, in its own master catalog, this system catalogs your new master catalog as one of its user catalogs.

Defining an Integrated Catalog Facility Master Catalog

Figure 1-1 shows an example of how to create an integrated catalog facility master catalog.

In addition to creating an integrated catalog facility master catalog, this job creates a VSAM volume data set (VVDS), if one does not already exist on the volume.

Note: You can catalog and allocate non-VSAM system data sets with a high-level qualifier other than "SYS1," then rename the system data sets to "SYS1." as follows:

```
ALTER SYSA.* NEWNAME(SYS1.*) CATALOG(catalog name)
```

In the examples in Figure 1-1, Figure 1-3, and Figure 1-4, the high-level qualifier is "SYSA."

```
//DEFICAT JOB MSGLEVEL=1,MSGCLASS=A
//DEFINEIC EXEC PGM=IDCAMS
//CATVOL DD VOL=SER=SG2001,UNIT=3390,DISP=OLD
//SYSPRINT DD SYSOUT=*
//SYSIN DD *
DEFINE MASTERCATALOG (NAME(SYSA.A.NEW.ICF.CATALOG) -
                     FILE(CATVOL) -
                     ICFCATALOG -
                     VOLUME(SG2001) -
                     CYLINDERS(5 2))
LISTCAT CATALOG (SYSA.A.NEW.ICF.CATALOG)
/*
```

Figure 1-1. Defining an Integrated Catalog Facility Catalog

For more information on defining an integrated catalog facility catalog, see:

- *DFSMS/MVS Planning for Installation*
- *DFSMS/MVS Managing Catalogs*
- *DFSMS/MVS Access Method Services for the Integrated Catalog Facility*

Defining Non-VSAM System Data Sets

Defining non-VSAM system data sets consists of cataloging them and allocating them.

To catalog non-VSAM system data sets for a new system, you must run access method services (IDCAMS) on an existing system. Therefore, use two steps to define non-VSAM system data sets:

1. Use IDCAMS to catalog the non-VSAM data sets.
2. Use JCL to allocate the non-VSAM data sets.

Defining Non-VSAM System Data Sets in PDSEs

You should not use a STEPCAT JCL statement when cataloging SMS-managed system data sets. To allocate SMS-managed data sets, see *DFSMS/MVS Managing Catalogs*. You can use JCL to perform both steps for PDSEs. See Figure 1-2 on page 1-6.

You need to allocate space for the non-VSAM system data sets that are not PDSEs.

Allocating Space for a PDSE

For SMS data sets, the allocation job locates the SMS data sets through the master catalog. Automatic class selection (ACS) routines identify the SMS data sets. Figure 1-2 on page 1-6 shows an example of how to catalog and allocate space for PDSEs. Also see *MVS/ESA Storage Management Library: Managing Data*.


```

//ALLOC      JOB  MSGLEVEL=1,MSGCLASS=A
//ALLOCATE   EXEC PGM=IEFBR14
//SYSPRINT   DD  SYSOUT=*
//SYSABEND   DD  SYSOUT=*
//*
//CSSLIB     DD  DSN=SYSA.CSSLIB,DISP=(,CATLG),
//           DSNTYPE=LIBRARY,
//           DCB=(RECFM=U,DSORG=PO),
//           SPACE=(see-Program-Directories),
//           STORCLAS=ALL
//*
//LINKLIB    DD  DSN=SYSA.LINKLIB,DISP=(,CATLG),
//           DSNTYPE=LIBRARY,
//           LABEL=EXPDT=99366,
//           DCB=(RECFM=U,DSORG=PO),
//           SPACE=(see-Program-Directories),
//           STORCLAS=ALL
//*
//MACLIB     DD  DSN=SYSA.MACLIB,DISP=(,CATLG),
//           DSNTYPE=LIBRARY,
//           LABEL=EXPDT=99366,
//           DCB=(RECFM=FB,LRECL=80,BLKSIZE=0),
//           SPACE=(see-Program-Directories),
//           STORCLAS=ALL
//*
//MIGLIB     DD  DSN=SYSA.MIGLIB,DISP=(,CATLG),
//           DSNTYPE=LIBRARY,
//           LABEL=EXPDT=99366,
//           DCB=(RECFM=U,DSORG=PO),
//           SPACE=(see-Program-Directories),
//           STORCLAS=ALL
/*

```

Figure 1-2. Allocating Space for the Non-VSAM System Data Sets in PDSEs on SMS Volumes Using JCL

Cataloging Other Non-VSAM System Data Sets

Figure 1-3 on page 1-7 shows an example of how to catalog non-VSAM system data sets that are not PDSEs in a master catalog. Use the JCL as described in Figure 1-2 to allocate and catalog PDSEs.

The job CATNVSAM creates catalog entries in the new master catalog for each of the non-VSAM system data sets represented by a DEFINE command.

When the data set is to reside on the system residence volume, you can specify the VOLUMES and DEVICETYPES parameters using indirect volume serial number and device type, as follows:

```
VOLUMES(*****) DEVICETYPES(0000)
```

Use this technique if you expect to change the system residence volume serial number; it allows you to use the non-VSAM data sets without having to recatalog them to point to the new volume. (See DEFINE NONVSAM in *DFSMS/MVS Access Method Services for the Integrated Catalog Facility* for more information about indirect volume serial number and device type.)

As shown at the end of Figure 1-3 on page 1-7, use the LISTCAT command to print the names of the non-VSAM entries in the new catalog.


```

//CATNVSAM JOB MSGLEVEL=1,MSGCLASS=A
//NONVSAM EXEC PGM=IDCAMS
//SYSPRINT DD SYSOUT=*
//SYSIN DD *
DEFINE NONVSAM (NAME(SYSA.BROADCAST) VOLUMES(SG2001) DEVICETYPES(3390)) -
    CATALOG(SYSA.A.NEW.ICF.CATALOG)
.
.
.
(specify other DEFINE NONVSAM statements as needed, one for each
system data set to be cataloged)
.
.
.
LISTCAT LEVEL (SYSA) CATALOG (SYSA.A.NEW.ICF.CATALOG)
/*

```

Figure 1-3. Cataloging the Other Non-VSAM System Data Sets Using Access Method Services

Allocating Space for Other Non-VSAM System Data Sets

Figure 1-4 on page 1-8 shows an example of how to allocate space for non-VSAM system data sets that are not used during SMP/E installation of IBM products. The job ALLOC allocates space for the non-VSAM system data sets that were cataloged by the job in Figure 1-3.

Because these data sets are not SMS-managed data sets, DISP, UNIT, and VOL are specified in the JCL. This job does not access or update the master catalog.

Notes:

1. For data sets that IBM products install into (such as SYS1.CMDLIB), see the space requirements described in each product's program directory. You must combine the space requirements from all the program directories to obtain the total space required for each library.

Note: If you order a system replacement offering such as CBIPO or SystemPac, IBM calculates the space requirements based on the products ordered.

2. For SMS data sets, a similar job would ignore the volume serial number, and locate the SMS data sets through the master catalog. Automatic class selection (ACS) routines identify the SMS data sets. (See *MVS/ESA Storage Management Library: Managing Data*.)
3. For additional information about the DCB subparameters, see the description of the individual data sets in this chapter.


```

//ALLOC    JOB  MSGLEVEL=1,MSGCLASS=A
//ALLOCATE EXEC PGM=IEFBRI4
//BROADCAST DD DSN=SYSA.BROADCAST,DISP=(,KEEP),VOL=(,RETAIN,SER=SG2001),
//          UNIT=3390,SPACE=(CYL,(3),,CONTIG)
//*
//DAE      DD DSN=SYSA.DAE,DISP=(,CATLG),VOL=(,RETAIN,SER=SG2001),
//          DCB=(RECFM=FB,DSORG=PS,LRECL=255,BLKSIZE=0),
//          UNIT=3390,SPACE=(TRK,(6,2))
//*
//DUMP     DD DSN=SYSA.DUMP00,DISP=(SHR,KEEP),VOL=(,RETAIN,SER=SG2001),
//          LABEL=EXPDT=99366,DCB=(RECFM=F,BLKSIZE=4160),
//          UNIT=3390,SPACE=(CYL,(12),,CONTIG)
//*
//IPLPARM  DD DSN=SYSA.IPLPARM,DISP=(,KEEP),VOL=(,RETAIN,SER=IODF-volume),
//          DCB=(RECFM=FB,DSORG=PO,LRECL=80,BLKSIZE=0),
//          UNIT=3390,SPACE=(TRK,(2,1,20))
//*
//LOGREC   DD DSN=SYSA.LOGREC,DISP=(,KEEP),VOL=(,RETAIN,SER=SG2001),
//          LABEL=EXPDT=99366,
//          UNIT=3390,SPACE=(CYL,(5),,CONTIG)
//*
//UADS     DD DSN=SYSA.UADS,DISP=(,KEEP),VOL=(,RETAIN,SER=SG2001),
//          DCB=(LRECL=80,RECFM=FB,BLKSIZE=0),
//          UNIT=3390,SPACE=(CYL,(5,2,70))
//*****
//*
//* Copy the following DD statement as many times as you need
//* to allocate the system data sets that you need.
//*
//* For RECFM, LRECL, and BLKSIZE recommendations,
//* and for any specific allocation requirements
//* (such as specifying CONTIG on the SPACE parameter),
//* see "Chapter 2. System Data Set Descriptions" on page 2-1.
//*
//* For SPACE recommendations, see the Program Directories
//* of all the products that you are installing. In some cases,
//* one data set might contain data supplied by more than one
//* product. You will need to add up the space requirements
//* for all the products shipping into those data sets.
//* SYS1.LINKLIB is such a data set, which is why nnn and mmm
//* are shown for the SPACE parameter.
//*
//*****
//LINKLIB  DD DSN=SYSA.LINKLIB,DISP=(,KEEP),VOL=(,RETAIN,SER=SG2001),
//          LABEL=EXPDT=99366,DCB=(RECFM=U,BLKSIZE=32760),
//          UNIT=3390,SPACE=(CYL,(nnn,,mmm))
//*

```

Figure 1-4. Allocating Non-VSAM System Data Sets Using JCL

Optimal Space Utilization and Performance

For optimal space utilization, a system data set's block size varies according to whether it is a non-load-module data set or a load module data set.

Non-Load-Module Data Set Block Sizes

Beginning with Data Facility Product (DFP) Version 3 Release 1, the system can automatically determine block sizes for optimal space utilization. You **should** allow the system to automatically determine block sizes for non-load-module data sets (including partitioned non-load-module data sets, sequential data sets, and VSAM data sets). The system also determines block size if you specify BLKSIZE=0 on the DD statement used to allocate the data set.

Load Module Data Set Block Sizes

Because the linkage editor is not always the first program to access a partitioned load module data set, you **should not** allow the system to automatically determine load module data set block sizes. To allocate or copy a load module data set, code its BLKSIZE value as shown in “Allocating Load Module Data Sets” on page 1-10.

After allocating or copying a load module data set, do not change that data set’s block size in any subsequent program. To copy load module data sets, see “Copying Load Module and Program Object Data Sets” on page 1-10.

Partitioned Data Sets vs. Partitioned Data Sets Extended

When deciding whether to allocate a load module data set as a PDS or a PDSE, consider the following issues:

- PDSE Support

Read the data set description to determine whether the data set can be a PDSE.

- Usability

If usability of a load module data set (such as reduced space-related abends, eliminating the need for compress operations, and better data set sharing across systems) is a concern, consider using a PDSE for the data set.

- Fetch Performance

Fetch performance, (the length of time to retrieve either a load module from a PDS or a program object from a PDSE) is affected by factors such as:

- The type of data set used to store load modules or program objects
- The environment (LPAR, VM Guest, or native MVS),
- Device, channel path, channel subsystem, and processor utilization.

Determine whether fetch performance will be important for this data set. Generally, fetch performance for modules used by online teleprocessing applications (whether TSO/E-, IMS-, or CICS-based) can be an important component of application response time, while fetch performance for batch applications is relatively unimportant. You must determine how important fetch performance is for each of the load module data sets in your installation.

If the average load module in the data set is 1 MB or larger, fetch performance can be improved by using a PDSE. Fetch performance for smaller modules will be better using a PDS.

- DASD Space Utilization

At reasonably large PDS block sizes, space utilization will generally be better when using a PDS for load module data sets than when using a PDSE.

Space Utilization in Partitioned Data Sets (PDSs)

DASD space utilization for load modules in a PDS is essentially a function of block size. Larger block sizes will generally yield progressively better space utilization until the block size exceeds the largest load module. There is no further improvements until larger load modules are added to the data set. This is true because utilities that create and copy load modules will write “short” blocks when a load module does not happen to end where the end of a full block would fall. A truncated block is written, and the next block is started immediately after it, even if fewer bytes remain on the track than would be needed to write a full block.

Because there is always (at least) a count field associated with each DASD record, and because there are gaps between them and the data records, optimum space

utilization will be realized when a minimum number of records is written. This is achieved at the highest possible block size for load modules.

The highest supported block size is 32,760. You should use this value when allocating partitioned data sets for load modules unless allocating them on devices with track lengths below 32,760 or if you want to copy them between device types with track lengths below 32,760 without using IEBCOPY's COPYMOD function. See "Copying Load Module and Program Object Data Sets" for more information.

PDS Performance

Program fetch performance for load modules in a PDS depends on the block size; large block sizes generally have the best fetch performance. Whether altering the block size makes a detectable difference in fetch performance depends on average load module length and device, control unit, channel path, channel subsystem, and processor utilization.

Allocating Load Module Data Sets

Because the linkage editor is not always the first program to access a partitioned load module data set, you should not allow the system to automatically determine load module data set block sizes. If it does, it may choose a block size that will not yield optimum space utilization and performance, or that will make it slightly more difficult to copy load modules between device types.

After allocating or copying a load module data set, do not change that data set's block size in any subsequent program. If you need to change the block size of a load module data set, allocate a new one with the new block size and copy the original one to it. To copy load module data sets, see "Copying Load Module and Program Object Data Sets".

To allocate a load module data set, specify the following DCB subparameters in the output DD statement:

```
RECFM=U  
BLKSIZE=32760
```

Copying Load Module and Program Object Data Sets

Use IEBCOPY to copy a PDSE and to migrate a PDS to a PDSE or a PDSE to a PDS.

Use IEBCOPY (or a similar routine) to copy a load module data set. If you use IEBCOPY, you should also use its COPYMOD control statement.

If the linkage editor is the first program to use a load module data set that you have copied, code PARM=DCBS in the EXEC parameter.

Defining VSAM System Data Sets

To define VSAM system data sets, use access method services to catalog and allocate space for these data sets in a single job. VSAM system data sets include the storage index, the page data sets, and the SMF data sets.

Figure 1-5 on page 1-12 shows an example of how to define VSAM system data sets.

For the initial installation, this example defines all data sets on one volume; however, after the first IPL, distribute these data sets on separate volumes for improved performance.

In Figure 1-5:

- The first DEFINE CLUSTER command defines a VSAM key-sequenced data set with the characteristics of the VIO journaling data set, in this case SYS1.STGINDEX.
- The second DEFINE CLUSTER command defines a single VSAM entry-sequenced data set with the characteristics of an SMF system data set.
- The first three DEFINE PAGESPACE commands define system paging data sets for pageable link pack area (PLPA), common system area (CSA), and the first LOCAL, respectively. You must define at least three page data sets. The total space for the first and second, PLPA and CSA, page data sets must be large enough to hold the PLPA, extended PLPA, CSA, and extended CSA pages. The remaining page data set, LOCAL, must be large enough to hold VIO pages and pageable private area pages. In addition, the LOCAL page data set must be large enough to hold the maximum amount of dump data that will be captured. This maximum is defined by the MAXSPACE parameter on the CHNGDUMP command.

For additional information on how to determine the amount of space to allocate for each page data set, see “Defining Page Data Sets” on page 1-12.

- Finally, the LISTCAT command lists each entry in the catalog and its attributes.

See “SYS1.DDIR” on page 2-8 for instructions regarding the creation of the VSAM system data set SYS1.DDIR.


```

//DEFVSAM JOB MSGLEVEL=1,MSGCLASS=1
//VSAMDEF EXEC PGM=IDCAMS
//STEP CAT DD DSN=SYS1.A.NEW.ICF.CATALOG,DISP=OLD
//VOLUME DD DISP=OLD,VOL=SER=SG2001,UNIT=3390
//SYSABEND DD SYSOUT=*
//SYSPRINT DD SYSOUT=*
//SYSIN DD *
DEFINE CLUSTER (NAME (SYS1.STGINDEX) -
               VOLUMES (SG2001) -
               CYLINDERS (5) -
               KEYS (12 8) -
               BUFFERSPACE (20480) -
               RECORDSIZE (2041 2041) -
               FILE (VOLUME) -
               REUSE) -
DATA (CONTROLINTERVALSIZE (2048)) -
INDEX (CONTROLINTERVALSIZE (4096))
DEFINE CLUSTER (NAME (SMF data set) -
               VOLUMES (SG2001) -
               NONINDEXED -
               CYLINDERS (12) -
               REUSE -
               RECORDSIZE (4086 32767) -
               SPEED -
               SPANNED -
               CONTROLINTERVALSIZE (4096) -
               SHAREOPTIONS (2)) -
DEFINE PAGESPACE (NAME (SYS1.PAGE1) -
                  CYLINDERS (15) -
                  FILE (VOLUME) -
                  VOLUMES (SG2001))
DEFINE PAGESPACE (NAME (SYS1.PAGE2) -
                  CYLINDERS (75) -
                  FILE (VOLUME) -
                  VOLUMES (SG2001))
DEFINE PAGESPACE (NAME (SYS1.PAGE3) -
                  CYLINDERS (100) -
                  FILE (VOLUME) -
                  VOLUMES (SG2001))
LISTCAT ALL
/*

```

Figure 1-5. Defining the VSAM System Data Sets, Using Access Method Services

Defining Page Data Sets

Page data sets contain the paged-out portions of address spaces, the common service area (CSA), and the data written to virtual I/O (VIO) data sets.

To define page data sets using the access method services DEFINE command, see “Defining VSAM System Data Sets” on page 1-10.

In allocating space using access method services, allocate space in cylinders. Only primary extents can be specified for page data sets.

Page data sets must be in a master catalog. To use page data sets from the old production system, you can use the master catalog from the old production system or IDCAMS Define Recatalog. See “Chapter 3. Using Data Sets from the Old Production System” on page 3-1.

Defining a page data set consists of allocating space for it on a direct access volume, cataloging it, formatting it, and including its name in the PAGE parameter in either the IEASYS00 or an IEASYSxx member of SYS1.PARMLIB.

You must define at least three page data sets before IPLing the system. Before installing the system, you can define as many as 256 page data sets. Specify the page data sets, which you have defined before installing the system, in either the IEASYS00 or IEASYSxx member of SYS1.PARMLIB.

After installing the system, you can define additional page data sets:

- By specifying the data set names in the IEASYS00 or IEASYSxx parmlib member.
- During IPL, by including their names on PAGE=.
- After the system is initialized, by using the PAGEADD command to add local page data sets.

The system uses the first-named page data set in the IEASYS00 or IEASYSxx member of SYS1.PARMLIB, or on the PAGE= parameter used in reply to message IEA101A, for the pageable link pack area (PLPA). The system uses the second-named page data set for the common areas.

For more information about specifying page data set names in SYS1.PARMLIB and about system parameter members, see *z/OS MVS Initialization and Tuning Reference*.

Chapter 2. System Data Set Descriptions

This chapter contains descriptions of the master catalog, the I/O definition file (IODF), SYSn.IPLPARM, LOGREC, STGINDEX, and all system data sets that have the **SYS1** high level qualifier.

Master Catalog

Contents

The master catalog is a required system data set that contains data set and volume information necessary to locate data sets and user catalogs.

Allocation Information

The master catalog must reside on a direct access volume, which can be the system residence volume. Define the master catalog as an integrated catalog facility (ICF) catalog. Assign the master catalog a unique name.

To provide faster response to concurrent requests for catalog entries, your master catalog should primarily contain user catalog entries. User catalogs contain entries for most data sets, indexes, and volumes.

The master catalog can be shared across systems with the aid of symbolics. The logrec and VIO journaling data set can be uniquely specified.

Additional Information

For information about setting up the master catalog, see *DFSMS/MVS Managing Catalogs*.

IODF

Contents

An I/O definition file (IODF) is a VSAM data set that contains hardware and software configuration definitions.

Allocation Information

Hardware Configuration Definition (HCD) creates the input/output definition file (IODF). You do not need to preallocate an IODF; you allocate it through HCD, and it resides on the volume you specify through HCD. For more information about migrating IODFs and using shared IODFs, see *z/OS HCD User's Guide* and *z/OS Planning for Installation*.

Placing Production IODFs

You specify the name of your production IODF in a LOADxx member. You can place LOADxx members in either the SYSn.IPLPARM or SYS1.PARMLIB data set. Your choice determines the volume on which you can place that data set. Your choice also determines on which volume you place the production IODFs pointed to by the LOADxx members.

The LOADxx member must point to a production IODF. If you place the LOADxx members in SYSn.IPLPARM, you must place the production IODFs on the same volume as SYSn.IPLPARM. (See Figure 2-1.) In this case, you can place SYS1.PARMLIB on any volume.

Placing SYSn.IPLPARM and its associated IODFs on the same IODF volume allows you to make backup copies of that IODF volume. See “Backing Up IODF Volumes”.

System Residence Volume	IODF Volume
SYS1.NUCLEUS	IODFs SYSn.IPLPARM LOADxx Members

Figure 2-1. LOADxx Members in SYSn.IPLPARM on IODF Volume

The LOADxx member must point to a production IODF. If you place the LOADxx members in SYS1.PARMLIB, and you **do not** place SYS1.PARMLIB on the system residence volume, you **must** place the production IODFs on the same volume as SYS1.PARMLIB. (See Figure 2-2.)

System Residence Volume	IODF Volume
SYS1.NUCLEUS	IODFs SYS1.IPLPARM LOADxx Members

Figure 2-2. LOADxx Members in SYS1.PARMLIB on IODF Volume

A LOADxx member must point to a production IODF. If you place the LOADxx members in SYS1.PARMLIB, and you place SYS1.PARMLIB on the system residence volume, you can place the production IODFs on another volume. (See Figure 2-3.)

System Residence Volume	IODF Volume
SYS1.NUCLEUS SYS1.PARMLIB LOADxx Members	IODFs

Figure 2-3. LOADxx Members in SYS1.PARMLIB on System Residence Volume

Backing Up IODF Volumes

You can create backup copies of your production IODFs on an alternate IODF volume. If the primary IODF volume becomes inaccessible, you can IPL through one of the backup IODFs on an alternate IODF volume. To copy IODFs to an alternate volume, use the following procedure:

1. Place a SYSn.IPLPARM data set on the primary IODF volume.
2. Place, in the SYSn.IPLPARM data set, the LOADxx members that point to the IODFs on the primary IODF volume.
3. Name all the IODFs on the primary IODF volume as follows:

'SYSn.IODFxx'

Where:

SYSn High level qualifier in SYSn.IPLPARM

n The same numeral, 0 through 9, that you specified in SYSn.IPLPARM

xx Hexadecimal number, 00 through FF

4. In the LOADxx members, make sure that you **do not** specify the high level qualifiers of the IODF names. The system will default the high level qualifiers of the IODF names to the SYSn.IPLPARM high level qualifier (SYSn).

For example, in Figure 2-4, the system has defaulted the high level qualifiers of the IODF names to the SYS3.IPLPARM high level qualifier (SYS3). Therefore, the LOADxx members in SYS3.IPLPARM point to SYS3.IODFxx data sets in the primary IODF volume.

Note: The example in Figure 2-4 assumes that you **did not** specify, in the LOADxx members, the high level qualifiers of the IODF names.

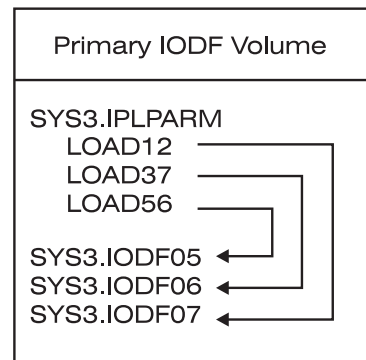


Figure 2-4. Primary IODF Volume with SYSn.IPLPARM Data Set

1. Copy both the SYSn.IPLPARM data set and its associated IODFs (the SYSn.IODFxx data sets) to an alternate IODF volume.
2. Use either DFDSS (for SMS-managed volumes) or IEBCOPY to copy the LOADxx members in SYSn.IPLPARM.
3. Use HCD panels to copy the IODFs interactively.
Alternatively, you can use IDCAMS to allocate backup IODFs, then use HCD batch invocations to copy the IODFs.

Assign a different "n" numeral to the SYSn.IPLPARM data set and SYSn.IODFxx data sets on the alternate IODF volume.

For example, in Figure 2-5 on page 2-4, the primary IODF volume has SYS3.IPLPARM and SYS3.IODFxx data sets. The alternate IODF volume has SYS5.IPLPARM and SYS5.IODFxx data sets.

Note: If you ***did not*** specify, in the LOADxx members, the high level qualifiers of the IODF names, and the IODF data set name suffixes (xx) are the same on both volumes, you do not need to modify the LOADxx members in SYS5.IPLPARM.

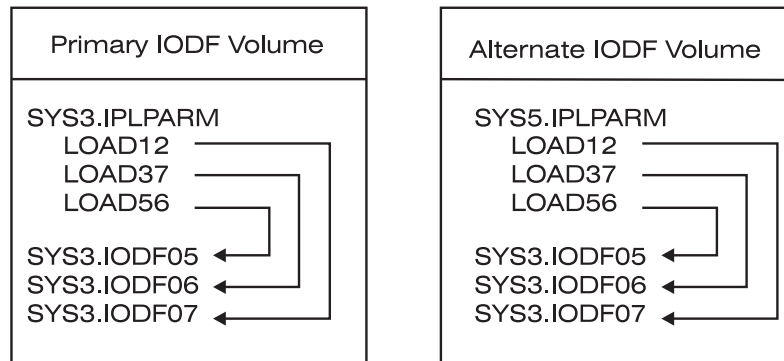


Figure 2-5. Primary and Alternate IODF Volumes with SYSn.IPLPARM Data Sets

SYSn.IPLPARM

Contents

SYSn.IPLPARM is an optional partitioned data set that contains LOADxx members that point to I/O definition files (IODFs) that reside on the same volume as SYSn.IPLPARM. For more information about the relationships between a SYSn.IPLPARM data set and its associated IODFs, see *z/OS Planning for Installation*.

Allocation Information

This system data set must reside on a direct access volume. This volume should contain only one SYSn.IPLPARM data set and its associated IODFs. (Character “n” is a single numeral, 0 through 9.)

For allocation, specify the following DCB subparameters on the DD statement:

```

RECFM=FB
LRECL=80
BLKSIZE=0

```

Usage Information

SYSn.IPLPARM is particularly useful in a multi-system environment. You can use one SYSn.IPLPARM data set for each system. On each system, the SYSn.IPLPARM data set must be on the volume where the production IODF for that system resides.

You can use SYSn.IPLPARM data sets only in MVS/ESA SP 4.2 or later operating systems.

While migrating from MVSCP to HCD, SYSn.IPLPARM might contain LOADxx members that point to IODFs and others that point to MVSCP nucleus configuration members.

SYS1.APPCSI

Contents

SYS1.APPCSI is an optional VSAM key sequenced data set. It is the side information file for APPC/MVS, which helps control the flow of conversations in an APPC/MVS network.

Allocation Information

Allocate this data set only if you are using APPC/MVS. This system data set must reside on a direct access volume, which can be the system residence volume.

To allocate this data set, use the sample job shipped in SYS1.SAMPLIB member ATBSIVSM. To maintain this data set, use the APPC administrative utility (ATBSDFMU). For more information on allocating and maintaining this data set, see *z/OS MVS Planning: APPC/MVS Management*.

SYS1.APPCTP

Contents

SYS1.APPCTP is an optional VSAM key sequenced data set. It is the TP profile file for APPC/MVS, which helps control the flow of conversations in an APPC/MVS network.

Allocation Information

Allocate this data set only if you are using APPC/MVS. This system data set must reside on a direct access volume, which can be the system residence volume.

To allocate this data set, use the sample job shipped in SYS1.SAMPLIB member ATBTPVSM. To maintain this data set, use the APPC administrative utility (ATBSDFMU). For more information on allocating and maintaining this data set, see *z/OS MVS Planning: APPC/MVS Management*.

SYS1.BROADCAST

Contents

SYS1.BROADCAST is a required basic direct access method (BDAM) data set that can contain two types of TSO/E messages:

- Notices—messages available to all users of a system
- Mail—messages available to specific users of a system

This system data set also contains a notice directory to make it easier to access each type of message.

Allocation Information

This system data set must reside on a direct access volume, which can be the system residence volume. Catalog this data set in the master catalog. For improved system efficiency, allocate space in cylinders.

Notes:

1. Specify DCB information for this data set as follows:
DCB(LRECL, BLKSIZE=129, RECFM=F, DSORG=DA)

2. Do not specify an expiration date for this data set.
3. Do not share this data set across systems unless global resource serialization is installed and active.

Usage Information

Use the TSO/E SYNC command to initialize this data set and to synchronize it with the RACF data set, SYS1.UADS, or both.

SYS1.CMDLIB

Contents

SYS1.CMDLIB is an optional partitioned data set that contains TSO/E command processor routines, service routines, and utility programs.

Allocation Information

This system data set must reside on a direct access volume, which can be the system residence volume.

Catalog it and allocate space for it only if you activate TSO/E. You can allocate secondary space. If this library is in the LNKST concatenation, you must catalog this library in the master catalog.

You can use LNKST statements in PROGxx instead of using LNKSTxx to define the LNKST concatenation. At IPL, ensure that you have a LNKST ACTIVATE statement for the LNKST set that you have defined, and specify PROG=xx instead of LNK=xx.

To allocate this data set, specify the following DCB subparameters on the DD statement:

```
RECFM=U
LRECL=0
BLKSIZE=32760
```

To copy this data set, see “Copying Load Module and Program Object Data Sets” on page 1-10.

SYS1.CSSLIB

Contents

SYS1.CSSLIB is a required partitioned data set (PDS) or partitioned data set extended (PDSE) that contains IBM-provided linkage-assist routines that programs use for accessing callable services.

Each linkage-assist routine provides the logic needed to locate and invoke a callable service. See *z/OS MVS Migration* and *DFSMS/MVS DFSMSdfp Advanced Services*.

During system installation, system modules access the callable services. User modules can also use callable services.

Linkage-assist routines, through inputs to the linkage editor, resolve the references that user modules make to callable services. Some linkage-assist routines have the only-loadable (OL) characteristic.

Allocation Information

This system data set must reside on a direct access volume, which can be the system residence volume.

SYS1.CSSLIB is automatically included in the LNKST concatenation, which is formed by concatenating programming libraries to SYS1.LINKLIB. The LNKSTxx member of SYS1.LINKLIB contains the names of program libraries that are to be concatenated to SYS1.LINKLIB to form the LNKST concatenation. Allocate LNKST data sets exclusively with primary extents; otherwise, updates to LNKST libraries cause the data set to expand into secondary extents. See *z/OS MVS Initialization and Tuning Reference*.

This system data set must be cataloged in the master catalog.

To allocate this data set, specify the following DCB subparameters on the DD statement:

```
RECFM=U
LRECL=0
BLKSIZE=32760
```

To copy this data set, see “Copying Load Module and Program Object Data Sets” on page 1-10.

SYS1.DAE

Contents

SYS1.DAE is an optional fixed-block sequential data set that contains a permanent record of unique dumps identified by dump analysis and elimination (DAE).

Allocation Information

SYS1.DAE is required only if you activate DAE. SYS1.DAE is the default name for the data set; you can specify the DAE data set name using the DSN parameter in the ADYSETxx parmlib member. This system data set must reside on a direct access volume, which can be the system residence volume. You can allocate secondary space. The DAE data set can be SMS-managed. When you want to share the DAE data set, ensure that the DAE data set is cataloged on each system that will be sharing it.

When using SYS1.DAE, specify DISP=SHR so that you can browse records of unique dumps. You can add, update, or delete records in SYS1.DAE using TSO/E or ISPF editors or other data set facilities, but do not edit the symptom string. You can share the DAE data set across systems in a sysplex. If you share the DAE data set, IBM recommends that you specify a data set name other than SYS1.DAE.

For allocation, specify the following on the DD statement:

```
RECFM=FB
LRECL=255
DSORG=PS
BLKSIZE=0
DISP=(,CATLG)
```


In addition, you should specify the DAE data set on direct access storage, with enough space for 400 records.

You should also protect the DAE data set using RACF or a password.

Additional Information

For additional information on DAE and the use of this data set, see *z/OS MVS Diagnosis: Tools and Service Aids*.

For information about providing serialization for the DAE data set in a sysplex, see *z/OS MVS Planning: Global Resource Serialization*.

SYS1.DBBLIB

Contents

SYS1.DBBLIB is an optional partitioned data set that contains the compression building blocks used by the DFP access method compression (DAM and VSAM) support. SYS1.DBBLIB is initialized during DFSMS initialization.

Allocation Information

This system data set must reside on DASD and must be cataloged.

Specify DCB subparameters for this data set as follows:

RECFM=VB
LRECL=80
BLKSIZE=8800

Usage Information

Do not modify this data set; if you modify the data set, the system will continue to operate, but compression services will not be provided.

SYS1.DDIR

Contents

SYS1.DDIR is an optional VSAM data set that contains the sysplex dump directory. The directory can be shared by the systems in a sysplex. When a system writes an SVC dump, the system automatically enters the title, symptoms, and other problem data about the dump into the sysplex dump directory. You can use subcommands of the interactive problem control system (IPCS) to enter information into the directory about other problem data in data sets, such as stand-alone dumps and trace data sets.

SYS1.DDIR is the default name for the sysplex dump directory. An installation can specify another name in the SYSDDIR statement of the BLSCECT parmlib member or another member accessed through the BLSCECT parmlib member.

Allocation Information

Use the IPCS BLSCDDIR CLIST to create a sysplex dump directory. The VOL keyword on the CLIST defaults to VOL(VSAM01) or you may explicitly use the keyword to cause the sysplex dump directory to be placed on a designated volume. The following TSO/E command invokes the CLIST, names the sysplex dump directory SYS1.DDIR, and places it on a DASD volume named VSAM01.


```
%blscddir dsn(sys1.ddir)
```

To use the BLSCDDIR CLIST, you need access to the SYS1.SBLSCLI0 system data set through a SYSPROC DD statement or a TSO/E ALTLIB command. See *z/OS MVS IPCS Customization* for information about the BLSCDDIR CLIST.

The sysplex dump directory must contain 5000 bytes for each dump that may be listed. The directory can be administered through IPCS subcommands, such as ADDDUMP, EVALDUMP, EVALSYM, COPYDDIR, DROPSYM, and DROPDUMP. The DROPDUMP subcommand can be used to remove listings for old dumps that are no longer needed.

SYS1.DGTCLIB

Contents

SYS1.DGTCLIB is an optional partitioned data set that contains the command list (CLIST) text for the interactive storage management facility (ISMF).

Allocation Information

This system data set must reside on a direct access volume, which can be the system residence volume. You should catalog this system data set, and you can allocate secondary space for it.

When using ISMF, you must also allocate this data set to your TSO session.

Because this data set is a CLIST data set, you can concatenate it to other CLIST data sets. Specify the same RECFM and LRECL values for this data set that you do for the other CLIST data sets.

If you have not yet established CLIST data set conventions, specify a nominal set of DCB subparameters, such as:

```
RECFM=FB  
LRECL=80  
BLKSIZE=0
```

Note: Concatenate SYS1.DGTCLIB to a procedure with a ddname of SYSPROC. (If you wish, you can use the ISPF logon procedure.)

SYS1.DGTLLIB

Contents

SYS1.DGTLLIB is an optional partitioned data set that contains system load modules for the interactive storage management facility (ISMF).

Allocation Information

This system data set must reside on a direct access volume, which can be the system residence volume. You should catalog this system data set. If this library is in the LNKST concatenation, you must catalog this library in the master catalog and you can allocate secondary space. Allocate LNKST data sets exclusively with primary extents; otherwise, updates to LNKST libraries cause the data set to expand into secondary extents. See *z/OS MVS Initialization and Tuning Reference*.

To allocate this data set, specify the following DCB subparameters on the DD statement:

```
RECFM=U
LRECL=0
BLKSIZE=32760
```

To copy this data set, see “Copying Load Module and Program Object Data Sets” on page 1-10.

Note: Concatenate SYS1.DGTLLIB to ISPF load libraries that have a ddname of ISPLLIB.

SYS1.DGTMLIB

Contents

SYS1.DGTMLIB is an optional partitioned data set that contains the message text for the interactive storage management facility (ISMF).

Allocation Information

This system data set must reside on a direct access volume, which can be the system residence volume. You should catalog this system data set, and you can allocate secondary space for it.

Because this data set is an ISPF data set, you must concatenate it to other ISPF data sets. Specify the same RECFM and LRECL values for this data set that you do for other ISPF message data sets.

If ISPF is not yet installed, specify a nominal set of DCB subparameters, such as:

```
RECFM=FB
LRECL=80
BLKSIZE=0
```

Note: Concatenate SYS1.DGTMLIB to ISPF message libraries that have a ddname of ISPLMLIB.

SYS1.DGTPLIB

Contents

SYS1.DGTPLIB is an optional partitioned data set that contains the dialog panels for the interactive storage management facility (ISMF).

Allocation Information

This system data set must reside on a direct access volume, which can be the system residence volume. You should catalog this system data set, and you can allocate secondary space for it.

Because this data set is an ISPF panel data set, you must concatenate it to other ISPF panel data sets. Specify the same RECFM and LRECL values for this data set that you do for other ISPF data sets.

If ISPF is not yet installed, specify a nominal set of DCB subparameters, such as:

```
RECFM=FB
LRECL=80
```


BLKSIZE=0

Note: Concatenate SYS1.DGTPLIB to ISPF panel libraries that have a ddname of ISPLIB.

SYS1.DGTSLIB

Contents

SYS1.DGTSLIB is an optional partitioned data set that contains the dialog skeletons for the interactive storage management facility (ISMF).

Allocation Information

This system data set must reside on a direct access volume, which can be the system residence volume. You should catalog this system data set, and you can allocate secondary space for it.

When using ISMF, you must also allocate this data set to your TSO session.

Because this data set is an ISPF skeleton data set, you must concatenate it to other ISPF skeleton data sets. Specify the same RECFM and LRECL values for this data set that you do for other ISPF data sets.

If ISPF is not yet installed, specify a nominal set of DCB subparameters, such as:

RECFM=FB

LRECL=80

BLKSIZE=0

Note: Concatenate SYS1.DGTSLIB to ISPF skeleton libraries that have a ddname of ISPLIB.

SYS1.DGTTLIB

Contents

SYS1.DGTTLIB is an optional partitioned data set that contains the dialog tables for the interactive storage management facility (ISMF).

Allocation Information

This system data set must reside on a direct access volume, which can be the system residence volume. You should catalog this system data set, and you can allocate secondary space for it.

Because this data set is an ISPF table data set, you must concatenate it to other ISPF table data sets. Specify the same RECFM and LRECL values for this data set that you do for other ISPF data sets.

If ISPF is not yet installed, specify a nominal set of DCB subparameters, such as:

RECFM=FB

LRECL=80

BLKSIZE=0

Note: Concatenate SYS1.DGTTLIB to ISPF table libraries that have a ddname of ISPTLIB.

SYS1.DUMPnn

Contents

The SYS1.DUMPnn system data sets (SYS1.DUMP00 through SYS1.DUMP99) are optional sequential data sets that contain system dumps, which record areas of virtual storage in case of system task failures.

You can also use automatically allocated data sets for SVC dumps. These data sets are allocated when the system writes the dump. The data set can be allocated from a set of DASD volumes or from System Managed Storage (SMS) classes. For more information, see automatically allocated data sets for the SVC dump in *z/OS MVS Diagnosis: Tools and Service Aids*.

Allocation Information

SYS1.DUMPnn data sets are optional. You can define from 1 to 100 system dump data sets. They all must reside on direct access devices. After IPL, you can use the DUMPDS command to add or remove dump data sets.

You can enter a CHNGDUMP operator command to set the MAXSPACE parameter to a value several times as large as the largest expected dump. This allows the system to process several dumps simultaneously.

Notes:

1. Do not share the dump data sets across systems.
2. Preallocate all dump data sets.
3. You can define dump data sets before or after installing a product.
4. You can allocate secondary storage. To reduce storage used by dump data sets, first allocate small amounts of primary storage, then allocate enough secondary storage for the largest expected dumps.
5. The system does not support dump data sets that span volumes. Therefore, make sure that each volume containing dump data sets has enough storage to allow data set expansion. Each dump data set will contain only one dump.
6. Dump data sets can reside on the system residence volume.
7. Specifications:
 - Allocate space for, and catalog, the dump data sets.
 - Place dump data sets on permanently resident volumes.

For allocation, specify the following DCB subparameters on the DD statement:

```
RECFM=FB  
LRECL=4160  
BLKSIZE=4160
```

Additional Information

For further information, see *z/OS MVS Diagnosis: Tools and Service Aids*.

SYS1.FDEFLIB

Contents

SYS1.FDEFLIB is an optional partitioned data set that contains forms definition (FORMDEF) objects for Advanced Function Printing.

Allocation Information

This system data set must reside on a direct access volume, which can be the system residence volume. When using SYS1.FDEFLIB, specify DISP=SHR.

Allocate space for, and catalog, this data set.

Install this data set according to *PSF/MVS Program Directory*.

For allocation, specify the following DCB subparameters on the DD statement:

```
RECFM={VBM|VBA|VM|VA}  
LRECL=8205  
BLKSIZE=0
```

SYS1.FONTLIB

Contents

SYS1.FONTLIB is an optional partitioned data set that contains various font objects (coded fonts, font character sets, and code pages) for Advanced Function Printing.

Allocation Information

This system data set must reside on a direct access volume, which can be the system residence volume. When using SYS1.FONTLIB, specify DISP=SHR.

Allocate space for, and catalog, this data set.

Install this data set according to *Advanced Function Printing Fonts Program Directories*.

For allocation, specify the following DCB subparameters on the DD statement:

```
RECFM={VBM|VBA|VM|VA}  
LRECL=8205  
BLKSIZE=0
```

SYS1.HELP

Contents

SYS1.HELP is an optional partitioned data set that contains HELP information about the syntax, operands, and function of each TSO/E command.

Allocation Information

SYS1.HELP is required only if you use the TSO/E HELP command. This system data set must reside on a direct access volume, which can be the system residence volume. You can allocate secondary space.

For allocation, specify the following DCB subparameters on the DD statement:

```
RECFM=FB  
LRECL=80  
BLKSIZE=0
```

Additional Information

For information on this system data set, see *z/OS TSO/E Customization* and *z/OS TSO/E Programming Guide*.

SYS1.IMAGELIB

Contents

SYS1.IMAGELIB is a required partitioned data set that contains the 1403, 3203 Model 5, and 3211 universal character set (UCS) images; 3203 Model 5, 3211, and 3800 forms control buffer (FCB) modules; 3800 character arrangement table modules; 3800 graphic character modification modules; 3800 copy modification modules; 3800 library character sets; 3525 data protection images (DPIs); and 3890 document processor SCI programs.

MVS/DFP Utilities describes how to use the IEBIMAGE utility to install the IBM-supplied library character sets in SYS1.IMAGELIB. For information on adding either an IBM UCS (universal character set) or an IBM FCB (forms control buffer) image to SYS1.IMAGELIB, see *MVS/DFP System Programming Reference*.

You can include in this data set user-written forms control buffer (FCB) images, universal character set (UCS) images, and 3800 support modules.

Note: To pick up changes made to SYS1.IMAGELIB, the job entry subsystem (either JES2 or JES3) must be restarted.

Allocation Information

This system data set must reside on a permanently mounted direct access volume, which can be the system residence volume. Catalog this data set in the master catalog. You can allocate secondary space. To authorize SYS1.IMAGELIB to the authorized program facility (APF), add the name and volume serial number of SYS1.IMAGELIB to the PROGxx member of SYS1.PARMLIB. If dynamic APF is used, SYS1.IMAGELIB should be APF-authorized.

To allocate this data set, specify the following DCB subparameters on the DD statement:

```
RECFM=U
LRECL=0
BLKSIZE=32760
```

To copy this data set, see “Copying Load Module and Program Object Data Sets” on page 1-10.

Note: Installations sensitive to security considerations should protect SYS1.IMAGELIB to ensure that unauthorized programs cannot gain authorization by link-editing into this library.

SYS1.INDMAC

Contents

SYS1.INDMAC is an optional partitioned data set that contains the macro definitions for the industry subsystems.

You can include user-written macros in SYS1.INDMAC before installing industry subsystem support.

Allocation Information

SYS1.INDMAC is required only if you install industry subsystem support. This system data set must reside on a direct access volume, which can be the system residence volume. For improved system efficiency, allocate space in cylinders. You can allocate secondary space.

For allocation, specify the following DCB subparameters on the DD statement:

```
RECFM=FB  
LRECL=80  
BLKSIZE=0
```

SYS1.ISAMLPA

Contents

SYS1.ISAMLPA is an optional partitioned data set that contains all the ISAM component modules loaded into the pageable link pack area (PLPA).

The purpose of this data set being separate from SYS1.LPALIB is to make it easy for the system programmer to omit ISAM from the system. This saves virtual storage in LPA. To omit ISAM from the system, do not specify SYS1.ISAMLPA in the LPALST concatenation.

Allocation Information

This system data set must reside on a direct access volume, which can be the system residence volume. If this data set is used, it must be cataloged in the master catalog, APF-authorized, and added to the LPALST concatenation. Allocate space on a cylinder boundary. You can allocate secondary space.

To allocate this data set, specify the following DCB subparameters on the DD statement:

```
RECFM=U  
LRECL=0  
BLKSIZE=32760
```

To copy this data set, see “Copying Load Module and Program Object Data Sets” on page 1-10.

SYS1.LINKLIB

Contents

SYS1.LINKLIB is a required partitioned data set (PDS) or partitioned data set extended (PDSE) that contains programs and routines referred to by the XCTL, ATTACH, LINK, and LOAD macro instructions, as well as nonresident system routines. SYS1.LINKLIB also contains the assembler program, the linkage editor, the utility programs, and some service aids.

Note: The program management binder shipped with DFSMS/MVS 1.1, or higher, is in SYS1.LPALIB.

You can include user-written routines, in load module form, in SYS1.LINKLIB before installing a product.

Allocation Information

This system data set must reside on a direct access volume, which can be the system residence volume. Catalog this data set in the master catalog.

IBM recommends that you allocate SYS1.LINKLIB space in cylinders. For maximum efficiency, do not use alternate tracks. If this data set is a PDS, IBM recommends that you do not allocate secondary space. If you allocate secondary space for this data set, subsequent secondary space allocations can cause members to be placed on additional secondary data set extents. If compressing the data set does not bring those additional members onto extents that were used during the current IPL, the additional members will not be available for use until the next IPL.

Note: If you have DFSMS/MVS 1.1 installed and SMS is active, you can escape this restriction by creating this data set as a PDSE on an SMS-managed volume.

MVS automatically authorizes SYS1.LINKLIB to the authorized program facility (APF).

The LNKSTxx member of SYS1.PARMLIB contains the names of program libraries that are to be concatenated to SYS1.LINKLIB to form the LNKST concatenation. Allocate LNKST data sets exclusively with primary extents; otherwise, updates to LNKST libraries cause the data set to expand into secondary extents. See *z/OS MVS Initialization and Tuning Reference*.

To allocate this data set, specify the following DCB subparameters on the DD statement:

```
RECFM=U
LRECL=0
BLKSIZE=32760
```

To copy this data set, see “Copying Load Module and Program Object Data Sets” on page 1-10.

Logrec Data Set

Contents

The logrec data set is an optional data set that contains statistical data about machine failures (processor failures, I/O device errors, channel errors). It also contains records for program error recording, missing-interrupt information, and dynamic device reconfiguration (DDR) routines. The logrec data set cannot be shared between systems.

If you decide not to use a logrec data set, you can either use a logrec log stream to record error and environmental records across a sysplex or you can disable error recording (intended for test environments).

Allocation Information

The logrec data set is an unmovable sequential system data set that must reside on a direct access volume, which can be the system residence volume.

IBM recommends that you not allocate secondary space for the data set. Any secondary space that is allocated will not be used.

Notes:

1. Do not specify DCB subparameters.
2. Do not share this data set across systems.
3. Run the IFCDIP00 program to initialize the logrec data set prior to the initial IPL of the new system.
4. When running IFCDIP00 in a multi-system environment with the default name SYS1.LOGREC, take care to insure that the logrec data set is uniquely specified with the volume-serial. This will prevent the initialization of another system's logrec data set in the event that IFCDIP00 is run on a different system.

The IBM supplied default name for the logrec data set is SYS1.LOGREC. To change the logrec data set name known to the system, use the LOGREC parameter of the IEASYSxx parmlib member. (To share the parmlib member across systems and reduce the number of required IEASYSxx specifications, use the symbolic, &SYSNAME, as part of the data set name.)

In a multisystem environment, if you specify a unique name for the logrec data set, IBM recommends that you do not place this name in the SYSTEMS exclusion resource name list in parmlib member GRSRNLxx.

Note: In a shared master catalog environment, do not permit the logrec data set name to default to SYS1.LOGREC. Use the LOGREC parameter to define unique names for all systems sharing the catalog.

Additional Information

You can increase or decrease the size of the logrec data set after installing your new system using the IFCDIP00 program. After changing the space allocation of the logrec data set, you must reIPL the system to use the new instance of the logrec data set.

For more information about defining the logrec data set or setting up a logrec log stream to record error and environmental records in a sysplex, see *z/OS MVS Diagnosis: Tools and Service Aids*.

For information about log streams, see *z/OS MVS Programming: Assembler Services Guide*.

SYS1.LPALIB

Contents

SYS1.LPALIB is a required partitioned data set that contains all the modules loaded into the pageable link pack area (PLPA). Those modules include system routines, SVC routines, data management access methods, nonresident machine-check handler modules, the program management binder shipped with DFSMS/MVS 1.1, authorization and accounting exit routines, logon mode tables, and some TSO/E modules.

You can include user-written routines, in load module form, in SYS1.LPALIB before installing a product.

Allocation Information

This system data set must reside on a direct access volume, which can be the system residence volume. Catalog this data set in the master catalog. Allocate space on a cylinder boundary. You can allocate secondary space. SYS1.LPALIB cannot be a PDSE.

The LPALSTxx member of SYS1.PARMLIB contains the names of program libraries that you want MVS to concatenate to SYS1.LPALIB. This is called the LPALST concatenation. (See *z/OS MVS Initialization and Tuning Reference*.)

To allocate this data set, specify the following DCB subparameters on the DD statement:

```
RECFM=U
LRECL=0
BLKSIZE=32760
```

To copy this data set, see “Copying Load Module and Program Object Data Sets” on page 1-10.

SYS1.MACLIB

Contents

SYS1.MACLIB is a required partitioned data set that contains macro definitions.

You can include user-written system macros in SYS1.MACLIB before installing a product.

Allocation Information

This system data set must reside on a direct access volume, which can be the system residence volume.

For improved system efficiency, allocate space in cylinders. You can allocate secondary space.

For allocation, specify the following DCB subparameters on the DD statement:

```
RECFM=FB
LRECL=80
BLKSIZE=0
```

Assembler macros are supplied in SYS1.MACLIB and SYS1.MODGEN. Make both available to the assembler when your program uses macros.

SMF Data Set

Contents

The SMF system data sets are optional VSAM data sets that contain information collected by the system management facilities (SMF) routines or other measurement facilities.

Allocation Information

SMF data sets are required only if SMF or other measurement facilities will do recording.

- Each SMF data set must be created before the first IPL that starts SMF recording.
- SMF data sets must reside on a permanently mounted direct access volume.
- SMF data sets cannot be shared across systems.

For specific information about defining SMF data sets, including how to select the SMF data set control interval, see *z/OS MVS System Management Facilities (SMF)*.

SYS1.MIGLIB

Contents

SYS1.MIGLIB is a required partitioned data set (PDS) or partitioned data set extended (PDSE) that is the system load library for the interactive problem control system (IPCS) and all component and subsystem dump exit modules. The component and subsystem dump exits that must function during SNAP processing must also reside in SYS1.LPALIB.

Allocation Information

This system data set must reside on a direct access volume, which can be the system residence volume. Catalog this data set in the master catalog. For improved system efficiency, allocate space in cylinders.

Note: SYS1.MIGLIB is automatically included in the LNKST concatenation, which is formed by concatenating programming libraries to SYS1.LINKLIB. The LNKSTxx member of SYS1.LINKLIB contains the names of program libraries that are to be concatenated to SYS1.LINKLIB to form the LNKST concatenation. Allocate LNKST data sets exclusively with primary extents; otherwise, updates to LNKST libraries cause the data set to expand into secondary extents. See *z/OS MVS Initialization and Tuning Reference*.

To allocate this data set, specify the following DCB subparameters on the DD statement:

```
RECFM=U  
LRECL=0  
BLKSIZE=32760
```

To copy this data set, see “Copying Load Module and Program Object Data Sets” on page 1-10.

SYS1.MODGEN

Contents

SYS1.MODGEN is a required partitioned data set that contains macro definitions.

You can include user-written system macros in SYS1.MODGEN before the installation of a product.

Allocation Information

This system data set must reside on a direct access volume, which can be the system residence volume.

For improved system efficiency, allocate space in cylinders. You can allocate secondary space.

For allocation, specify the following DCB subparameters on the DD statement:

RECFM=FB
LRECL=80
BLKSIZE=0

Assembler macros are supplied in SYS1.MACLIB and SYS1.MODGEN. Make both available to the assembler when your program uses macros.

SYS1.MSGENU

Contents

SYS1.MSGENU is an optional partitioned data set that contains English-language message tables used by the MVS message service (MMS).

Allocation Information

This system data set must reside on a direct access volume, which can be the system residence volume.

For allocation, specify the following DCB subparameters on the DD statement:

RECFM=VB
LRECL=259
BLKSIZE=6475

SYS1.MSGJPN

Contents

SYS1.MSGJPN is an optional partitioned data set that contains Japanese-language message tables used by the MVS message service (MMS).

Allocation Information

This system data set must reside on a direct access volume, which can be the system residence volume.

For allocation, specify the following DCB subparameters on the DD statement:

RECFM=VB
LRECL=259
BLKSIZE=6475

SYS1.NUCLEUS

Contents

SYS1.NUCLEUS is a required partitioned data set that contains:

- The resident portion of the control program in two members, IEAVEDAT (DAT-off) and IEANUC0x (DAT-on).
- The nucleus initialization program (NIP), and programs for hardware configuration definition (HCD) used by IPL.
- Possibly a pointer (in member SYSCATxx) to an alternate master catalog.

Member SYSCATLG of SYS1.NUCLEUS can contain a pointer to the master catalog. However, IBM recommends that you use the SYSCAT statement of the LOADxx member of SYS1.PARMLIB or SYSn.IPLPARM to identify the master catalog.

You can create additional specialized versions of the DAT-on nucleus.

Allocation Information

This system data set must reside on the system residence volume. Do not allocate secondary space or multiple extents. Specify CONTIG in the SPACE parameter. (See Figure 1-4 on page 1-8.) SYS1.NUCLEUS cannot be a PDSE. You must catalog this data set in the master catalog.

To allocate this data set, specify the following DCB subparameters on the DD statement:

```
RECFM=U
LRECL=0
BLKSIZE=32760
```

To copy this data set, see “Copying Load Module and Program Object Data Sets” on page 1-10.

SYS1.OVERLIB

Contents

SYS1.OVERLIB is an optional partitioned data set that contains overlays generated by you or by the Overlay Generation Language program.

Allocation Information

This system data set is required only if you install the Overlay Generation Language program with IBM Advanced Function Printing. This system data set must reside on a direct access volume, which can be the system residence volume.

When using SYS1.OVERLIB, specify DISP=OLD when running the Overlay Generation Language program, and DISP=SHR at all other times.

Allocate space for, and catalog, this data set. Install this data set according to *PSF/MVS Program Directory*.

For allocation, specify the following DCB subparameters on the DD statement:

```
RECFM={VBM|VBA|VM|VA}
LRECL=8205
BLKSIZE=0
```

SYS1.PARMLIB

Contents

SYS1.PARMLIB is a required partitioned data set that contains IBM-supplied and installation-created members, which contain lists of system parameter values.

You can include user-written system parameter members in SYS1.PARMLIB before installing a product.

Allocation Information

This system data set must reside on a direct access volume, which can be the system residence volume. For improved system efficiency, allocate space in cylinders. You can allocate secondary space. Catalog this data set in the master catalog. SYS1.PARMLIB cannot be a PDSE.

Note: If SYS1.PARMLIB contains one or more LOADxx members that point to IODFs, you must place SYS1.PARMLIB on the volume that contains those IODFs or on the system residence volume.

For allocation, specify the following DCB subparameters on the DD statement:

RECFM=FB
LRECL=80
BLKSIZE=0

Additional Information

For additional information, see *z/OS MVS Initialization and Tuning Reference*.

PASSWORD Data Set

Contents

The PASSWORD data set is an optional sequential data set that contains passwords for non-VSAM data sets. Note that passwords are ignored for SMS-managed data sets.

Note: IBM does NOT recommend the use of passwords as primary protection for your data. See “Protecting System Data Sets” on page 1-3.

Allocation Information

This system data set must reside on the system residence volume. The space allocated to the PASSWORD data set must be contiguous. The amount of space allocated depends on the number of data sets you want to protect. Each entry in the PASSWORD data set requires 132 bytes of space. Catalog this data set in the master catalog.

For allocation, specify the following DCB subparameters on the DD statement:

RECFM=F
LRECL=80
BLKSIZE=80
KEYLEN=52

Additional Information

For additional information, see *DFSMS/MVS Using Data Sets*.

SYS1.PDEFLIB

Contents

SYS1.PDEFLIB is an optional partitioned data set that contains page definitions for Advanced Function Printing.

Allocation Information

This system data set must reside on a direct access volume, which can be the system residence volume. When using SYS1.PDEFLIB, specify DISP=SHR.

Allocate space for and catalog this data set.

Install this data set according to *PSF/MVS Program Directory*.

For allocation, specify the following DCB subparameters on the DD statement:

```
RECFM={VBM|VBA|VM|VA}  
LRECL=8205  
BLKSIZE=0
```

SYS1.PROCLIB

Contents

SYS1.PROCLIB is a required partitioned data set that contains the source JCL used to perform certain system functions. The source JCL can be for system tasks or processing program tasks invoked by the operator or the programmer.

You can include user-written procedures in SYS1.PROCLIB before installing a product.

Allocation Information

This system data set must reside on a direct access volume, which can be the system residence volume. SYS1.PROCLIB cannot be a PDSE. For improved system efficiency, allocate space on a cylinder boundary. You can allocate secondary space. However, if additional extents are used, JES cannot access the additional extents. Catalog this data set in the master catalog.

For allocation, specify the following DCB subparameters on the DD statement:

```
RECFM=FB  
LRECL=80  
BLKSIZE=0
```

SYS1.PSEGLIB

Contents

SYS1.PSEGLIB is an optional partitioned data set that contains page segments for Advanced Function Printing.

Allocation Information

This system data set must reside on a direct access volume, which can be the system residence volume. When using SYS1.PSEGLIB, specify DISP=SHR.

Allocate space for, and catalog, this data set.

Install this data set according to *PSF/MVS Program Directory*.

For allocation, specify the following DCB subparameters on the DD statement:

```
RECFM={VBM|VBA|VM|VA}  
LRECL=8205
```


BLKSIZE=0

SYS1.SAMPLIB

Contents

SYS1.SAMPLIB is a required partitioned data set that contains the installation verification procedure (IVP), the independent utilities, and the IPL text. It also contains sample exit routines.

Allocation Information

This system data set must reside on a direct access volume, which can be the system residence volume. You need not catalog this system data set, because you need it when installing (but not running) the system. You can allocate secondary space.

For allocation, specify the following DCB subparameters on the DD statement:

RECFM=FB
LRECL=80
BLKSIZE=3120

SYS1.SBLSCLI0

Contents

SYS1.SBLSCLI0 is an optional partitioned data set that contains the text of the command lists (CLISTs) for the interactive problem control system (IPCS).

You can include user-written IPCS CLISTs in SYS1.SBLSCLI0 before installing a product.

Allocation Information

This system data set must reside on a direct access volume, which can be the system residence volume. Catalog this data set. You can allocate secondary space.

Because this data set is a CLIST data set, you can concatenate it to other CLIST data sets. Specify the same RECFM and LRECL values for this data set that you do for the other CLIST data sets.

If you have not yet established CLIST data set conventions, specify a nominal set of DCB subparameters, such as:

RECFM=FB
LRECL=80
BLKSIZE=0

Note: Concatenate SYS1.SBLSCLI0 to a procedure with a ddname of SYSPROC. (If you wish, you can use the ISPF logon procedure.)

SYS1.SBLSKEL0

Contents

SYS1.SBLSKEL0 is an optional partitioned data set that contains the file tailoring skeletons for the interactive problem control system (IPCS) dialog programs.

You can include user-written IPCS dialog file tailoring skeletons in SYS1.SBLSKELO before installing a product.

Allocation Information

This system data set must reside on a direct access volume, which can be the system residence volume. Catalog this data set. You can allocate secondary space.

Because this data set is an ISPF skeleton data set, you must concatenate it to other ISPF skeleton data sets. Specify the same RECFM and LRECL values for this data set that you do for other ISPF data sets.

If you have not installed ISPF yet, specify a nominal set of DCB subparameters, such as:

```
RECFM=FB  
LRECL=80  
BLKSIZE=0
```

Note: Concatenate SYS1.SBLSKELO to ISPF skeleton libraries that have a ddname of ISPSLIB.

SYS1.SBLSMSG0

Contents

SYS1.SBLSMSG0 is an optional partitioned data set that contains the message text for the interactive problem control system (IPCS) dialog programs.

You can include user-written IPCS dialog message members in SYS1.SBLSMSG0 before installing a product.

Allocation Information

This system data set must reside on a direct access volume, which can be the system residence volume. Catalog this data set. You can allocate secondary space.

Because this data set is an ISPF data set, you must concatenate it to other ISPF message data sets. Specify the same RECFM and LRECL values for this data set that you do for other ISPF message data sets.

If you have not installed ISPF yet, specify a nominal set of DCB subparameters, such as:

```
RECFM=FB  
LRECL=80  
BLKSIZE=0
```

Note: Concatenate SYS1.SBLSMSG0 to ISPF message libraries that have a ddname of ISPMLIB.

SYS1.SBLSPNL0

Contents

SYS1.SBLSPNL0 is an optional partitioned data set that contains the dialog panels for the interactive problem control system (IPCS) dialog programs.

You can include user-written IPCS dialog panels in SYS1.SBLSPNL0 before installing a product.

Allocation Information

This system data set must reside on a direct access volume, which can be the system residence volume. Catalog this data set. You can allocate secondary space.

Because this data set is an ISPF panel data set, you must concatenate it to other ISPF panel data sets. Specify the same RECFM and LRECL values for this data set that you do for other ISPF data sets.

If you have not installed ISPF yet, specify a nominal set of DCB subparameters, such as:

```
RECFM=FB
LRECL=80
BLKSIZE=0
```

Note: Concatenate SYS1.SBLSPNL0 to ISPF panel libraries that have a ddname of ISPLIB.

SYS1.SBLSTBL0

Contents

SYS1.SBLSTBL0 is an optional partitioned data set that contains the dialog tables for the interactive problem control system (IPCS) dialog programs.

You can include user-written IPCS dialog tables in SYS1.SBLSTBL0 before installing a product.

Allocation Information

This system data set must reside on a direct access volume, which can be the system residence volume. Catalog this data set. You can allocate secondary space.

Because this data set is an ISPF table data set, you must concatenate it to other ISPF table data sets. Specify the same RECFM and LRECL values for this data set that you do for other ISPF data sets.

If you have not installed ISPF yet, specify a nominal set of DCB subparameters, such as:

```
RECFM=FB
LRECL=80
BLKSIZE=0
```

Note: Concatenate SYS1.SBLSTBL0 to ISPF table libraries that have a ddname of ISPTLIB.

SYS1.SCBDCLST

Contents

SYS1.SCBDCLST is an optional partitioned data set that contains the CLIST procedures to invoke and run hardware configuration definition (HCD).

Allocation Information

This system data set must reside on a direct access volume. It can also reside on the system residence volume. Catalog this data set. You can allocate secondary space.

Because this data set is a CLIST data set, you can concatenate it to other CLIST data sets. Specify the same RECFM and LRECL values for this data set that you do for the other CLIST data sets.

If you have not yet established CLIST data set conventions, specify a nominal set of DCB subparameters, such as:

```
RECFM=FB  
LRECL=80  
BLKSIZE=0
```

Note: Concatenate SYS1.SCBDCLST to a procedure with a ddname of SYSPROC. (If you wish, you can use the ISPF logon procedure.)

SYS1.SCBDHENU

Contents

SYS1.SCBDHENU is an optional partitioned data set that contains help panels for hardware configuration definition (HCD). This data set contains language-sensitive HCD modules.

Allocation Information

This system data set must reside on a direct access volume, which can be the system residence volume. IBM recommends that you catalog this data set.

To use these modules during HCD execution, they must reside in a library in the search order ISPF uses to locate programs. You can put this library in the search order by placing it in the ISPLLIB concatenation, the link list, or the LPA list. If you place this library in the link list concatenation or the LPA list concatenation, you must catalog it in the master catalog.

You can allocate secondary space.

To allocate this data set, specify the following DCB subparameters on the DD statement:

```
RECFM=U  
LRECL=0  
BLKSIZE=32760
```

To copy this data set, see “Copying Load Module and Program Object Data Sets” on page 1-10.

Note: If SYS1.SCBDHENU is not in the LINKLIB concatenation, concatenate it to the load libraries that have a DD name of ISPLLIB.

SYS1.SCBDHJPN

Contents

SYS1.SCBDHJPN is an optional partitioned data set that contains the Japanese-language help panels for hardware configuration definition (HCD). This data set also contains a few language-sensitive HCD modules.

Allocation Information

This system data set must reside on a direct access volume. It can also reside on the system residence volume. Catalog this data set. If this library is in the LNKST concatenation, you must catalog this library in the master catalog. You can allocate secondary space.

Because this data set is an ISPF help data set, you must concatenate it to other ISPF help data sets. Specify the same RECFM and LRECL values for this data set that you do for other ISPF data sets.

To allocate this data set, specify the following DCB subparameters on the DD statement:

```
RECFM=FB  
LRECL=0  
BLKSIZE=32760
```

To copy this data set, see “Copying Load Module and Program Object Data Sets” on page 1-10.

Note: If SYS1.SCBDHJPN is not in the LINKLIB concatenation, concatenate it to the load libraries that have a DD name of ISPLLIB.

SYS1.SCBDMENU

Contents

SYS1.SCBDMENU is an optional partitioned data set that contains the English-language messages for hardware configuration definition (HCD).

Allocation Information

This system data set must reside on a direct access volume. It can also reside on the system residence volume. Catalog this data set. You can allocate secondary space.

Note: Do not concatenate this data set; HCD concatenates it.

Data Set Characteristics

```
RECFM=FB  
LRECL=80  
BLKSIZE=0
```

SYS1.SCBDMJPN

Contents

SYS1.SCBDMJPN is an optional partitioned data set that contains the Japanese-language messages for hardware configuration definition (HCD).

Allocation Information

This system data set must reside on a direct access volume. It can also reside on the system residence volume. Catalog this data set. You can allocate secondary space.

Note: Do not concatenate this data set; HCD concatenates it.

Data Set Characteristics

RECFM=FB
LRECL=80
BLKSIZE=0

SYS1.SCBDPENU

Contents

SYS1.SCBDPENU is an optional partitioned data set that contains the English-language panels for hardware configuration definition (HCD).

Allocation Information

This system data set must reside on a direct access volume. It can also reside on the system residence volume. Catalog this data set. You can allocate secondary space.

Note: Do not concatenate this data set; HCD concatenates it.

Data Set Characteristics

RECFM=FB
LRECL=80
BLKSIZE=0

SYS1.SCBDPJPN

Contents

SYS1.SCBDPJPN is an optional partitioned data set that contains the Japanese-language panels for hardware configuration definition (HCD).

Allocation Information

This system data set must reside on a direct access volume. It can also reside on the system residence volume. Catalog this data set. You can allocate secondary space.

Note: Do not concatenate this data set; HCD concatenates it.

Data Set Characteristics

RECFM=FB
LRECL=80
BLKSIZE=0

SYS1.SCBDTENU

Contents

SYS1.SCBDTENU is an optional partitioned data set that contains the English-language key lists and the ISPF command table for hardware configuration definition (HCD).

Allocation Information

This system data set must reside on a direct access volume. It can also reside on the system residence volume. Catalog this data set. You can allocate secondary space.

Note: Do not concatenate this data set; HCD concatenates it.

Data Set Characteristics

RECFM=FB
LRECL=80
BLKSIZE=0

SYS1.SCBDTJPN

Contents

SYS1.SCBDTJPN is an optional partitioned data set that contains the Japanese-language key lists and the ISPF command table for hardware configuration definition (HCD).

Allocation Information

This system data set must reside on a direct access volume. It can also reside on the system residence volume. Catalog this data set. You can allocate secondary space.

Note: Do not concatenate this data set; HCD concatenates it.

Data Set Characteristics

RECFM=FB
LRECL=80
BLKSIZE=0

SYS1.SISTMAC1

Contents

SYS1.SISTMAC1 is a partitioned data set that contains Advanced Communication Function (ACF) / Virtual Telecommunications Access Method (VTAM) macro definitions. This system data set is required if you have ACF/VTAM installed.

You can include user-written system macros in SYS1.SISTMAC1.

Allocation Information

This system data set must reside on a direct access volume, which can be the system residence volume.

For improved system efficiency, allocate space in cylinders. You can allocate secondary space.

For allocation, specify the following DCB subparameters on the DD statement:

```
RECFM=FB  
LRECL=80  
BLKSIZE=0
```

SYS1.STGINDEX Data Set

Contents

The VIO journaling data set is an optional VSAM data set that contains auxiliary storage management records for virtual I/O (VIO) data sets to enable them to be saved across IPLs for Checkpoint/Restart. (VIO data sets cannot be preserved if CVIO or CLPA is specified at IPL time.)

The VIO journaling data set is required only if you will use Checkpoint/Restart to restart jobs automatically, and want to preserve VIO data sets used by such jobs across IPLs. For more information about Checkpoint/Restart, see *MVS/DFP Checkpoint/Restart*.

Allocation Information

This system data set must reside on a direct access volume, which can be the system residence volume. Permanently mount or reserve this volume while it is in use.

Do not share this data set across systems.

Using Access Method Services

If you plan to use the VIO journaling data set, you must predefine it and allocate space in cylinders. To predefine the data set, specify the following command and parameters with appropriate values where indicated. (In this example: values shown are sample values; the value of the VIO journaling data set is SYS1.STGINDEX.)

```
DEFINE CLUSTER -  
  (NAME(SYS1.STGINDEX) -  
  FILE(STGINDEX) -  
  KEYS(12 8) -  
  CYLINDERS(primary) -  
  BUFFERSPACE(20480) -  
  RECORDSIZE(2041 2041) -  
  VOLUME(volser) -  
  REUSE) -  
DATA (CONTROLINTERVALSIZE(2048)) -  
INDEX (CONTROLINTERVALSIZE(4096))
```

The IBM supplied default name for the VIO journaling data set is SYS1.STGINDEX. To change the VIO journaling data set name known to the system, use the VIODSN parameter of the IEASYSxx parmlib member. (To share the parmlib member across

systems and reduce the number of required IEASYSxx specifications, use the symbolic, &SYSNAME, as part of the data set name.)

In a multisystem environment, a unique VIO journaling data set must be created for each system, and IBM recommends that you *not* place the names in the SYSTEMS exclusion resource name list in parmlib member GRSRNLxx.

In a shared master catalog environment, do not permit the VIO journaling data set name to default to SYS1.STGINDEX. Use the VIODSN parameter to define unique names for all systems sharing the catalog.

Additional Information

For detailed information on using DEFINE CLUSTER, see *DFSMS/MVS Access Method Services for VSAM Catalogs*.

For more information on defining the VIO journaling data set, see *z/OS MVS Initialization and Tuning Reference*.

SYS1.SVCLIB

Contents

SYS1.SVCLIB is a required partitioned data set that contains some online test executive program (OLTEP) and appendage modules.

You can include user-written routines, in load module form.

Allocation Information

This system data set must reside on the system residence volume. Allocate space in cylinders. IBM recommends that you do not allocate secondary space. SYS1.SVCLIB cannot be a PDSE. Catalog this data set in the master catalog.

MVS automatically authorizes SYS1.SVCLIB to the authorized program facility (APF).

To allocate this data set, specify the following DCB subparameters on the DD statement:

```
RECFM=U
LRECL=0
BLKSIZE=32760
```

To copy this data set, see “Copying Load Module and Program Object Data Sets” on page 1-10.

SYS1.TCOMMACH

Contents

SYS1.TCOMMACH is an optional partitioned data set that contains ACF/TCAM record API macros.

Allocation Information

SYS1.TCOMMACH is required only if you install ACF/TCAM. This system data set must reside on a direct access volume, which can be the system residence volume.

You need not catalog this data set. For improved system efficiency, allocate space in cylinders. You can allocate secondary space.

For allocation, specify the following DCB subparameters on the DD statement:

```
RECFM=FB  
LRECL=80  
BLKSIZE=0
```

SYS1.TELCMLIB

Contents

SYS1.TELCMLIB is an optional partitioned data set that contains telecommunications subroutines in load module form.

You can include user-written routines, in load module form.

Allocation Information

SYS1.TELCMLIB is required only if you install BTAM/SP or ACF/TCAM. This system data set must reside on a direct access volume, which can be the system residence volume. For improved system efficiency, allocate space on a cylinder boundary. If this library is in the LNKST concatenation, you must catalog this library in the master catalog. You can allocate secondary space.

To allocate this data set, specify the following DCB subparameters on the DD statement:

```
RECFM=U  
LRECL=0  
BLKSIZE=32760
```

To copy this data set, see “Copying Load Module and Program Object Data Sets” on page 1-10.

SYS1.UADS

Contents

SYS1.UADS is an optional partitioned data set that contains a list of authorized TSO/E users, as well as information about those users.

Allocation Information

This system data set must reside on a direct access volume, which can be the system residence volume. Catalog this system data set, but allocate space only if you activate TSO/E. You can allocate secondary space.

For allocation, specify the following DCB subparameters on the DD statement:

```
RECFM=FB  
DSORG=PO  
LRECL=See note 4 on page 2-34.  
BLKSIZE=1720
```

Notes:

1. Do not specify an expiration date for SYS1.UADS.
2. Do not share this data set across systems unless global resource serialization is installed and active.

3. When allocating or reallocating SYS1.UADS, you must use the TSO/E SYNC command to synchronize SYS1.UADS, the RACF data set, and SYS1.BROADCAST.
4. SYS1.UADS must be allocated with LRECL=80 while installing TSO/E. When the SMP/E installation is complete, ensure that SYS1.UADS is reallocated with LRECL=172. Any high-level qualifier can be used for UADS while installing TSO/E. However, when you IPL, a SYS1.UADS data set must exist, be cataloged, and contain at least one user.

For information about setting up SYS1.UADS to achieve optimal space utilization and for a detailed explanation of sharing SYS1.UADS, see *z/OS TSO/E Customization*.

SYS1.VTAMLIB

Contents

SYS1.VTAMLIB is an optional partitioned data set that contains the ACF/VTAM load modules, installation-coded logon exit routines, authorization and accounting exit routines, and unformatted system services (USS) definition tables.

You can include user-written routines, in load module form.

Allocation Information

SYS1.VTAMLIB is required only if you install ACF/VTAM. This system data set must reside on a direct access volume, which can be the system residence volume. Catalog this data set. If this library is in the LNKST concatenation, you must catalog this library in the master catalog. You can allocate secondary space.

Note: SYS1.VTAMLIB, as well as the user-defined network control program load module library, must be authorized. Therefore, include both libraries in the PROGxx member of SYS1.PARMLIB.

To allocate this data set, specify the following DCB subparameters on the DD statement:

```
RECFM=U
LRECL=0
BLKSIZE=32760
```

To copy this data set, see “Copying Load Module and Program Object Data Sets” on page 1-10.

Chapter 3. Using Data Sets from the Old Production System

You might want to substitute some of the data sets from your old production system for those in the newly built system. The example that follows describes a six-step procedure for substituting the master catalog, page data sets, and the VIO journaling data set from the old production system for their equivalent members in the newly built system. Before using such a procedure, perform appropriate tests to ensure that the new system is operational. For information about IVPs (installation verification programs) for z/OS elements, see *z/OS Program Directory*.

Figure 3-1 shows selected data sets from an old production system on four volumes being combined with selected data sets from a newly built system on three volumes.

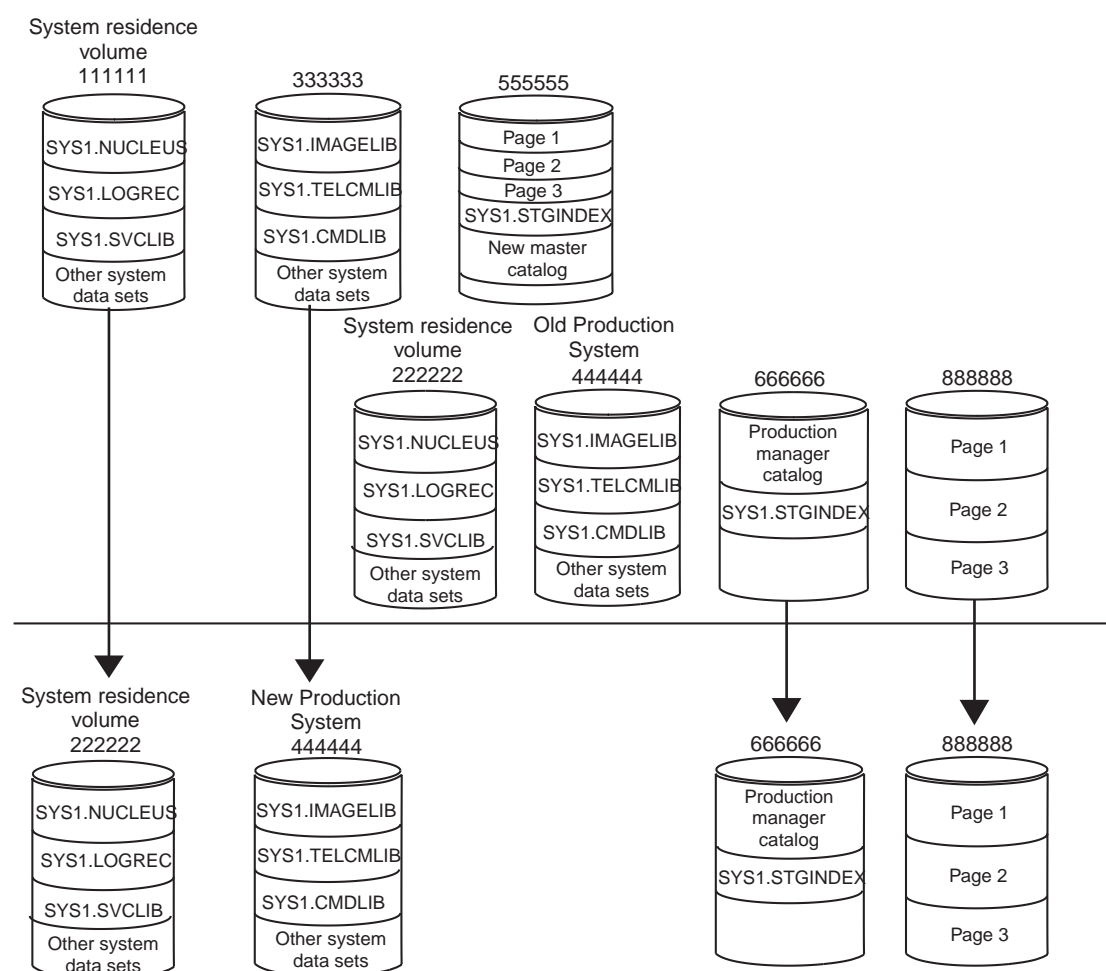


Figure 3-1. Combining Old Production System Data Sets with a Newly Built System

The procedure in the example assumes that none of the volumes on the old production system or on the newly built system contain both VSAM and non-VSAM data sets. If both VSAM and non-VSAM data sets reside on any volume, redefine them on different volumes before using the procedure.

If you recatalog non-VSAM data sets that reside on the system residence volume and are not APF-authorized in the IEAAPFxx member of SYS1.PARMLIB with a

specific volume serial number, consider specifying the VOLUMES and DEVICETYPES parameters using indirect volume serial number and device type (see “Defining Non-VSAM System Data Sets” on page 1-5).

Step 1

Note: If you use the SYSCAT statement of the LOADxx parmlib member to identify the master catalog, update the LOADxx parmlib member instead of the SYSCATLG member of SYS1.NUCLEUS.

Update the SYSCATLG member of SYS1.NUCLEUS of the newly built system to contain the volume serial number of the volume that contains the old production system’s master catalog, which resides on the 666666 volume. STEPA deletes the SYSCATLG member. STEPB adds the new member, identifying the volume serial number of the volume on which the production master catalog for the old production system resides.

```
//STEPA EXEC PGM=IEHPROGM
//NEWRES DD DISP=OLD,UNIT=3390,VOL=SER=111111
//SYSPRINT DD SYSOUT=A
//SYSIN DD *
SCRATCH DSN=SYS1.NUCLEUS,VOL=3390=111111,MEMBER=SYSCATLG
/*
//STEPB EXEC PGM=IEBGENER
//SYSIN DD DUMMY
//SYSUT2 DD DSN=SYS1.NUCLEUS(SYSCATLG),DISP=(MOD,KEEP),
// DCB=(BLKSIZE=18432),VOL=SER=111111,UNIT=3390
//SYSPRINT DD SYSOUT=A
//SYSUT1 DD *
666666 (See the following description.)
/*
```

Note: You must use IEBGENER in STEPB. (Using IEBUPDATE in STEPB would change the record formats of some data sets.)

The input statement format for STEPB is column-oriented:

Column	Content
1–6	Volume serial number for the volume containing the master catalog
7	Type of catalog

Catalog	Hex Code	Card Punch Code
ICF	F1	1
ICF with SYS%	F2	2
VSAM	00	12-0-9-8-1
VSAM	40	no punches

Note: Codes other than those shown in the preceding list are reserved. For more information on SYS%, see *DFSMS/MVS Managing Catalogs*.

8	Qualification levels of catalog aliases
---	---

Qualification Level	Hex Code	Card Punch Code
1	01	12-1-9
1	40	no punches
1	F1	1
2	02	12-2-9

Qualification Level	Hex Code	Card Punch Code
2	F2	2
3	03	12-3-9
3	F3	3
4	04	12-4-9
4	F4	4

Note: Codes other than those shown in the preceding list are reserved. For more information on catalog aliases, see *DFSMS/MVS Managing Catalogs*.

9–10 Catalog address space (CAS) service task lower limit value: C'18' to C'B4', where C'3C' is the default.

11–54 Master catalog name you specified while building the old production system, or the NAME parameter of the access method services DEFINE MASTERCATALOG command or DEFINE USERCATALOG command. You can also obtain the master catalog name from the data component name printed using LISTCAT for an integrated catalog facility catalog, or the cluster name printed using LISTCAT for a VSAM catalog.

Note: For information on creating an alternate master catalog, see *DFSMS/MVS Managing Catalogs*.

55–80 Unused

Step 2

The volume (555555 in the example) that contains the master catalog, the page data sets, and the VIO journaling data set (SYS1.STGINDEX) of the newly built system is no longer required. Demount it or vary it offline.

Step 3

Change the volume serial numbers of the volumes that contain the new version of the system data sets. In the example, these volumes are 111111, which contains SYS1.NUCLEUS and other data sets, and 333333, which contains SYS1.IMAGELIB and other data sets. First, vary volumes 111111 and 333333 offline. Then, using the REFORMAT command of Device Support Facilities, change the volume serial numbers of these volumes to the volume serial numbers of their counterparts on the old production system, 222222 and 444444.

Step 4

Recatalog any new system data sets. In this example, none are shown. However, if, for example, SYS1.CMDLIB were on the system residence volume of the newly built system; but on some volume other than the system residence volume in the old production system, uncatalog it, then recatalog it using access method services.

Step 5

Remove from the system the old production system residence volume, which contains SYS1.NUCLEUS and other data sets, and the volume containing SYS1.IMAGELIB and other data sets. In the example, the volume serial numbers are 222222 and 444444.

Step 6

IPL the new production system.

Appendix. Notices

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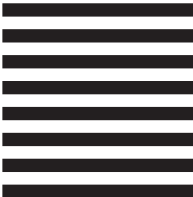
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